THAT WHICH IS CLAIMED IS:

1. A pseudo-random number generator, characterized in that it comprises:

- a first generator (10) for producing a sawtooth waveform signal having a first frequency F1,

- a second generator (12) for producing a pulse signal having a second frequency F2,

- a sampling circuit (14) for sampling the sawtooth waveform signal by the pulse signal to supply a sample, and

- a coding circuit (16) for coding the amplitude of the sample to supply binary values in series or in parallel.

2. Generator according to claim 1, characterized in that the coding circuit (16) is a comparator (60) which supplies a signal representative of a binary value 1 or 0 depending on whether the amplitude of the sample applied to an input terminal is greater than or less than a reference value (Vref) applied at the other input terminal.

3. Generator according to claim 2, characterized in that the reference value (Vref) is equal to the median excursion value of the saw tooth of the signal supplied by the first generator (10).

4. Generator according to claim 2, characterized in that the reference value (Vref) is equal to a mean value (Vm) of the amplitudes of the sample.

5. Generator according to claim 4, characterized in that the mean value (Vm) is obtained

by an RC circuit (62, 64) to which the sampled signals are applied.

6. Generator according to claim 1, characterized in that the coding circuit is an analog-to-digital converter which supplies a binary code of N digits in parallel, representative of the amplitude of said sample.

7. Generator according to any one of the preceding claims 1 to 6, characterized in that the first generator (10) producing a sawtooth waveform signal of frequency F1 comprises:

- a capacitor (40),

- switching means (70) for switching a charging and discharging current (i) of said capacitor (40), and

- switching control means (72) for controlling the switching of said current (i) to obtain a succession of charge and discharge cycles of said capacitor (40).

8. Generator according to claim 7, characterized in that said switching control means (72) comprise:

- two comparators (44, 46) for each comparing the charging voltage (Vout) of said capacitor (40) to a reference value (V^+, V^-) and supplying a signal when the charging voltage (Vout) reaches the reference value (V^+ or V^-), and

- a latch (48) for storing the signal supplied successively by each comparator.

9. Generator according to claim 7 or 8, characterized in that the switching means (70) for the

charging and discharging current (i) of the capacitor (40) comprise:

- a current generator (42) for supplying a constant current (i);
- current mirrors (T1, T4 to T7) for reproducing the current (i) so as to enable the capacitor (40) to be supplied in both flow directions, and
- a switch (T2, T3) controlled by the switching control means (72) for selecting the direction of current flow in said capacitor (40).

10. Generator according to any one of the preceding claims 1 to 9, characterized in that the second generator (12) producing a pulse signal having a second frequency F2 is a ring oscillator having an odd number of stages (E1, E2, E3), characterized in that:

- each stage (E1, E2 or E3) comprises an inverter circuit having two transistors (T11, T12), each transistor (T11 or T12) being supplied by a transistor (T10 or T13) whose gate voltage is fixed by a transistor (T16 or T14) connected as a diode and supplied by a constant current (i) supplied by a current generator (50).